



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,445	02/11/2005	Edmund Potsch	5367-123PUS	4452

27799 7590 11/01/2007
COHEN, PONTANI, LIEBERMAN & PAVANE
551 FIFTH AVENUE
SUITE 1210
NEW YORK, NY 10176

EXAMINER

KARIMI, PEGEMAN

ART UNIT	PAPER NUMBER
----------	--------------

2629

MAIL DATE	DELIVERY MODE
-----------	---------------

11/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,445

Applicant(s)

POTSCH, EDMUND

Examiner

Pegeman Karimi

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-14, 18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 and 17 is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-14, 18 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed on 08/17/2007 has been entered and considered by examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 5, 11, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Inou (U.S. Patent 6,078,274).

As to claim 1, Inou discloses a display apparatus (4, 7, 8, 2a, and 2b, Fig. 2) comprising:

a display layer (3) and

a touch-sensitive layer (2b) running parallel to the display layer (layers 3 and 2b are in parallel), wherein

that side of the touch-sensitive, which is remote from the display layer (3), (below layer 2b) includes an antireflection lattice (8), (col. 4, lines 42-43) comprising lattice elements which can move toward one another (i.e. a user touches a flexible substrate 3 causing the top lattice 8 to get closer to the bottom lattice 8), the lattice element forming

microscopic channels (Fig. 3, lattice elements form a microscopic channel with the width of $Dw = 20\mu m$ and length of $Pd - Dw = 80\mu m$) and absorbing incident light from the side (lattice elements are antireflective and can absorb light from any direction e.g. top side).

As to claim 11, Inou discloses a display apparatus (4, 7, 8, 2a, and 2b, Fig. 2) comprising:

a display layer (3) and

a touch-sensitive layer (2b) running parallel the display layer (elements 3 and 2b are in parallel, Fig. 1), wherein

the touch-sensitive layer comprises lattice elements that form microscopic channels in the touch sensitive layer (Fig. 3, lattice elements form a microscopic channel with the width of $Dw = 20\mu m$ and length of $Pd - Dw = 80\mu m$), the lattice spacing being matched to a pixel spacing on the display layer (col. 8, lines 1-5) such that the ratio of the lattice spacing to the pixel spacing is whole-numbered (col. 7, lines 59-64), (Calculating the ratio by $\frac{Pd}{P} = \frac{100\mu m}{200\mu m} \Rightarrow ratio = 1:2$, which 1 and 2 are whole numbers).

As to claim 19, Inou teaches a display apparatus comprising:

a display layer (3);

a touch-sensitive layer (2a) running parallel to the display layer (Fig. 1 clearly shows the display layer and the touch sensitive layer are in parallel); and

a further layer (bottom layer 8) comprising an antireflection lattice (col. 4, lines 42-43) comprising lattice elements which can move toward one another (i.e. user

touches a flexible substrate 3 causing the top lattice 8 to get closer to the bottom lattice 8), the further layer being mounted on top of the touch-sensitive layer (2a) on a side which is remote from the display layer (the bottom layer 8 is remote from the display layer 3) and is separate from the touch-sensitive layer (element 8 is a lattice element and element 2a is a touch sensitive layer, which are separate units).

As to claim 2, Inou teaches the lattice elements (8) are of strip-like design (Fig. 2, the lattice elements are formed in a strip-like pattern), comprising slots at nodes of the lattice (lattice elements create a slot at the nodes, where edges of four lattice elements come together), such that the lattice elements are able to move toward one another at the nodes of the lattice (Fig. 3, location where four closest corners of square 8 meets), (force vector of pressure in vertical or diagonal direction would bend the edges and corners/nodes of the lattice elements).

As to claim 5, Inou teaches the lattice spacing (DW, Fig. 8) is matched to a pixel spacing on the display layer (col. 8, lines 1-5) such that the ratio of the lattice spacing to the pixel spacing is whole-numbered (col. 7, lines 59-64), (Calculating the ratio by

$$\frac{Pd}{P} = \frac{100\mu m}{200\mu m} \Rightarrow ratio = 1:2, \text{ which 1 and 2 are whole numbers}).$$

As to claim 18, Inou teaches the lattice elements are of strip-like design (Fig. 2, the lattice elements are formed in a strip-like pattern) interrupted completely at nodes of the lattice (the channels created by the lattice interrupt/cross each other at the nodes) such that the lattice elements are able to move toward one another at the nodes of the lattice (Fig. 3, location where four closest corners of square 8 meets), (force vector of

Art Unit: 2629

pressure in vertical or diagonal direction would bend the edges and corners/nodes of the lattice elements).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inou (U.S. Patent 6,078,274) in view of Furuhashi (U.S. Pub. No. 2002/0000979 A1).

As to claim 3, Inou does not teach bristle -like design. Furuhashi teaches the lattice elements are of bristle-like design ([0105], lines 9-12). Therefore it would be obvious to one of ordinary skill in the art at the time the invention was made to have substituted the bristle-like design of Furuhashi to the touch panel of Inou to prevent the upper and lower resistance films from contacting with each other at a normal time, the spacers (lattice elements) are not limited to dot-like shapes, but may have any shapes such as bank-like shapes, strip-like shapes, or the like, if these shapes are not obstacles to input operation ([0104], lines 2-4; [0105], lines 9-12)

As to claim 4, Furuhashi teaches the lattice elements are of stud-like design ([0105], lines 9-12).

6. Claims 6, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inou (U.S. Patent 6,078,274) in view of Miura (U.S. Patent 5,647,152).

As to claim 6, Inou teaches a touch sensitive layer (2b), but does not teach an angle adjustment of the lattice elements. Miura teaches the angle between the lattice elements (2) and the display layer (1) is adjustable (col. 11, lines 6-19). Therefore it would be obvious to one of ordinary skill in the art at the time the invention was made to have used the adjustable angle between the lattice and display layer of Miura to the touch panel of Inou that even if the relative positional relationship between the visual point and the display screen is shifted up and down due to the installation condition, the image disturbing ratio by the light-shielding grating can be minimized to maintain satisfactory visibility by inclining only the light-shielding grating member frontward and backward without inclining the display as a whole (col. 2, lines 54-60)

As to claim 8, Furuhashi does not teach a light-absorbent material. Miura teaches lattice elements (2, Fig. 2) comprise a light-absorbent material (col. 5, line 17-22).

As to claim 9, Miura teaches the antireflection lattice (2) is removable (Fig. 9, by removing bolts 26a and 25a one can remove the lattice element).

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inou (U.S. Patent 6,078,274) in view of Miura (U.S. Patent 5,647,152) and further in view of Palffy-Muhoray (U.S. Patent 6,239,778).

As to claim 7, Furuhashi and Miura do not teach automatically adjusting the angle. Palffy-Muhoray teaches means (15, Fig. 2) for automatically adjusting the angle (liquid crystal material) on the basis of the angle of the incident ambient light (col. 5, lines 38-39 and lines 49-51). Therefore it would be obvious to one of ordinary skill in the art at the time the invention was made to have used the automatic adjusting angle of Palffy-Muhoray to the touch sensitive display of Inou as modified by Miura because adjustment of the variable voltage supply alters the light transmission properties of the cell by adjusting the orientation of the dichroic dye. (col. 2, lines 20-23).

8. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inou (U.S. Patent 6,078,274) in view of Palffy-Muhoray (U.S. Patent 6,239,778).

As to claim 12, note the discussion of Inou above. Inou teaches a touch-sensitive layer (2b). Inou does not teach the lattice elements made of liquid crystals. Palffy-Muhoray teaches the lattice elements (22, 24) are made of liquid crystals (col. 3, lines 46-48). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the liquid crystal lattice of Palffy-Muhoray to the touch-sensitive device of Inou to control the orientation of the molecules of the host liquid crystal material 22 and the absorption by dichroic dye 24 of entering

light 26a passing through cell 10 increases. The net result is a decrease in transmitted light 26b in the energized state (col. 4, lines 48-51).

As to claim 14, this claim differs from claim 7 only in that the limitation "optical properties" is additionally recited. Palfy-Muhoray clearly teaches the optical properties as voltage alters the orientation of the host liquid crystal material 22).

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inou (U.S. Patent 6,078,274) in view of Zhang (U.S. Pub. No. 2002/0075557).

As to claim 13, Inou does not teach an electrochromic material. Zhang teaches a lattice elements (16) being made of an electrochromic material (630, Fig. 7a), ([0061], line 1-4). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the electrochromic material of Zhang to the display panel of Inou because the electrochromic material of Zhang is to improve contrast ([0018], lines 1-2).

Allowable Subject Matter

10. Claims 15 and 17 are allowed.

Response to Arguments

11. Applicant's arguments filed on 08/17/2007 have been fully considered but they are not persuasive.

In view of amendment adding new claims 18 and 19, the reference Inou is used for rejection.

On page 12, applicant argues that Inou fails to teach or suggest, the lattice elements forming microscopic channels and absorbing incident light from the side. Inou still reads on the claim. Inou clearly teaches microscopic channels, which are the channels between the lattice elements 8 and with the size of $Dw = 20\mu m$ in width and $Pd - Dw = 80\mu m$ in length formed by the lattice elements. It is also clear from (col. 4, lines 42-43 of Inou) that these lattice elements are antireflective and can absorb light from any direction e.g. top side.

On page 13, lines 5-7, applicant argues that Inou does not teach or suggest that the lattice are of strip-like design having slots at nodes of the lattice such that the lattice elements are able to move towards one another at the nodes of the lattice. Inou in fig. 8 shows a configuration of lattice elements 8 that create a strip-like design. At the location where four closest corners of square 8 are coming together a slots like location is created. At these locations force vector of pressure in vertical or diagonal direction would bend the edges and corners/nodes of the lattice elements.

On Page 18, line 13-14, applicant argues that Inou does not teach or suggest lattice elements in the same single layer moving toward one another. The applicant does not include lattice elements in the same single layer moving toward one another in claim 19 and Inou reads on the claim where the function of moving the lattice elements closer to one another in the same single layer is not recited in the claim so, Inou clearly teaches the claim.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Inquiries

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegeman Karimi whose telephone number is (571) 270-1712. The examiner can normally be reached on Monday-Thursday 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pegeman Karimi
October 19, 2007


CHANH D. NGUYEN
SUPERVISORY PATENT EXAMINER